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Dave Campbell
Editorial Content Chief, *WOOD* magazine



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compact entertainment center



Deep, dual-shelf drawers with full-extension slides hold loads of easily accessible media.



A back with roller catches literally unlatches in a snap for easy and organized wiring connections.

Looking for a space-saving cabinet to hold your TV, electronic components, videos, and CDs? Let this handsome unit, made from red oak and red oak plywood, steal the show. Though it measures only 23¾" deep × 44" long × 26" high, it has spacious drawers that hold a total of about 110 DVDs or 70 videotapes, and a glass-door enclosed area with adjustable shelves for components. The entertainment center accepts TVs up to 42" wide and 23" deep. Need even more storage for your videos and CDs? Check out the companion media storage cabinet, presented in issue 160, or go to woodmagazine.com/mediastorage.

Start with the easy-to-make biscuit-joined base

1 From $\frac{3}{4}$ "-thick stock (we used red oak), cut the side rails (A) and front/back rails (B) to the sizes listed in the **Materials List**. Draw the curves on the rails, where dimensioned on **Drawing 1**, using a fairing stick. (For a simple and free fairing stick plan, go to woodmagazine.com/fairing.) Bandsaw and sand the curves smooth.

2 To form the foot halves (C), cut from $\frac{3}{4}$ "-thick stock two $2\frac{1}{2}\times 22$ " blanks. Angle your tablesaw blade 45° . Then bevel-rip one edge of each blank to the finished foot width of $2\frac{1}{4}$ ". Now crosscut four $4\frac{1}{2}$ "-long foot halves from each blank.

3 Make four copies each of the full-size left and right foot-half patterns on *page 17*. Spray-adhere the patterns to the foot halves, making sure you align the noted pattern edge with the beveled edge on each piece. Then bandsaw and sand the angled side on each piece to the pattern line.

4 Using your biscuit joiner, plunge slots for #10 biscuits in the foot halves (C), where shown on the patterns, and in the ends of the rails (A, B), where shown on **Drawing 1**. When cutting the slots in the beveled edges of the foot halves, angle your biscuit-joiner fence to 45° and adjust the height to position the slot cutter $\frac{1}{8}$ " from the *inside* faces

of the foot halves. This will prevent the cutter from going through the outside faces. Remove the patterns from the foot halves using a cloth moistened with paint thinner.

5 Glue, biscuit, and assemble the beveled edges of the mating left and right foot halves together, keeping the ends flush and the joints tight. After the glue dries, assemble the feet to the ends of the side rails (A) with biscuits, using $\frac{3}{4}$ " scrap as a straightedge to keep the outside faces of the feet and rails flush, as shown in **Photo A**. Now assemble the side rail/feet assemblies to the front/back rails (B) to complete the base, again using straightedges to keep the parts aligned and the base square. Sand the base to 220 grit, and set it aside.

Next up: the edging blanks and top/bottom panels

1 From $\frac{3}{4}$ "-thick stock, rip nine $\frac{3}{4}\times 96$ " pieces for the edging blanks (D).

Note: Many of the plywood panels for the entertainment center have edging. Save considerable time by preparing the edging blanks now and crosscutting them to the needed lengths as you build the project.

2 From $\frac{3}{4}$ " red oak plywood, cut the top/bottom panels (E) to $21\frac{1}{2}\times 41$ ". Then, from the edging blanks (D),

crosscut pieces to the lengths shown on **Drawing 2** plus $\frac{1}{2}$ " for the back edge of *both* panels and the front edge and ends of the *bottom* panel, noting the mitered front corners. (Cutting all edging $\frac{1}{2}$ " longer than the finished lengths allows you to trim the pieces to exact lengths for flush ends and tight miter joints.)

3 Glue and clamp the edging, centered, to the back edges of both panels. After the glue dries, trim the edging flush with the plywood ends. For an easy way to do this, see the **Shop Tip**, *page 4*. Then glue and clamp the edging to the front edge and ends of the bottom panel, verifying tight mitered front corners. Again, after the glue dries, trim the end edging flush with the back edging.

4 From $\frac{3}{4}$ "-thick stock, cut the top-panel trim blank (F) to the size listed. Then bevel-rip the bottom face of the blank at 20° , where dimensioned on **Drawing 2a**. Sand the bevel smooth.

5 Crosscut pieces from the trim blank to the lengths shown on **Drawing 2** (plus $\frac{1}{2}$ ") to fit the ends and front edge of the top panel (E), again noting the mitered front corners. Using the same process as for the edging (D), apply the trim to the panel, and cut the end trim flush with the back edging. Then sand the edging and trim on the top and bottom panels flush with the plywood faces.

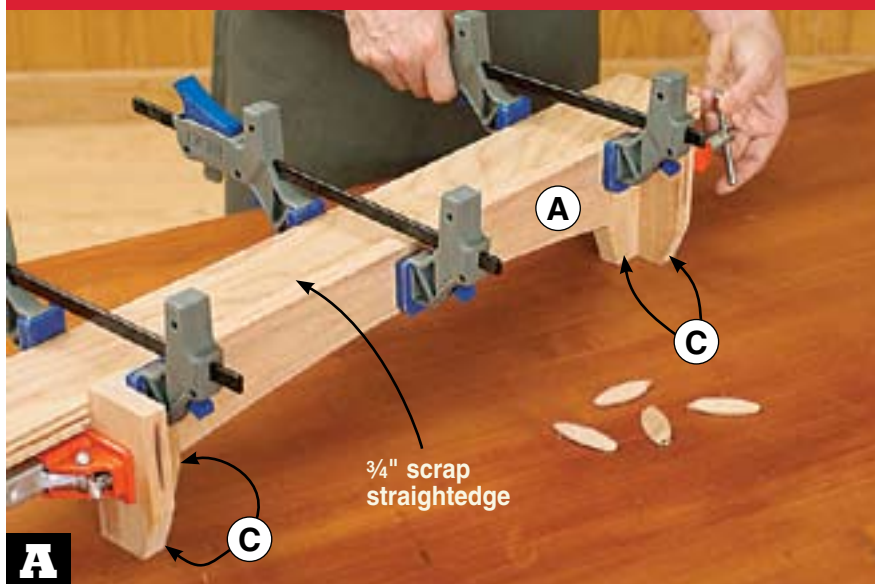
6 To form $\frac{3}{8}$ " partial round-overs on the bottom panel edging (D), where shown on **Drawings 2** and **2b**, chuck a $\frac{3}{8}$ " round-over bit in your table-mounted router. Round over the top and bottom edges of the side and then the front edging.

7 Position the bottom panel (D/E) on a flat surface with the bottom face up. Then glue and clamp the base assembly (A/B/C) to the panel, flush with the back of the rear edging (D) and centered side-to-side.

Build and mount the cases to the panels

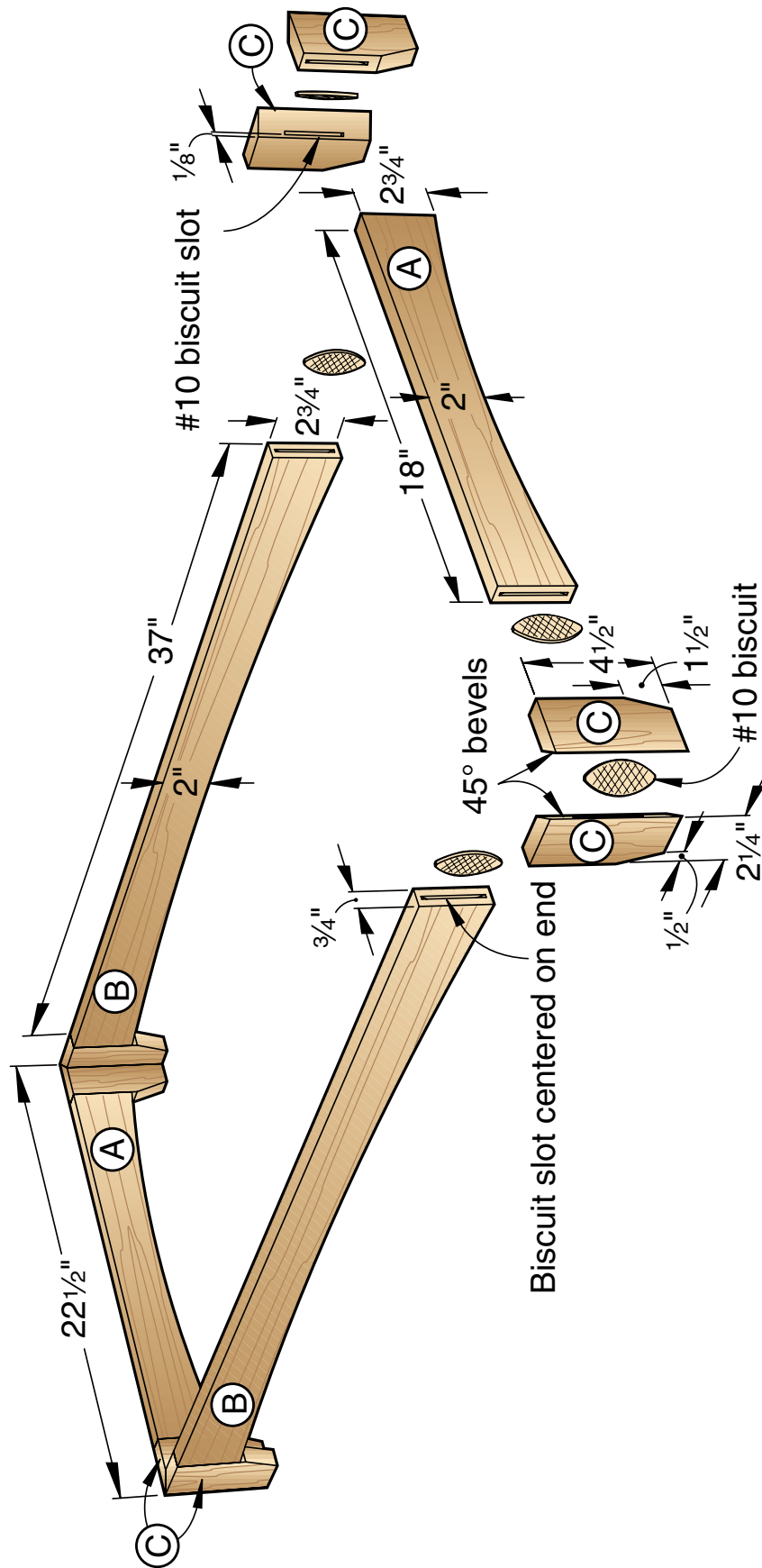
1 From $\frac{3}{4}$ " oak plywood, cut the sides (G) and tops/bottoms (H) for the two cases to the sizes listed. From an edging blank (D), crosscut four pieces to the lengths needed for the front edges of the tops/bottoms (H), where shown on **Drawing 3**. As before, apply, trim, and sand the edging.

GLUE THE FEET TO THE SIDE RAILS



Glue, biscuit, and clamp the feet (C) to the ends of the side rails (A). Use $\frac{3}{4}$ " scrap as a straightedge to keep the parts aligned.

I BASE

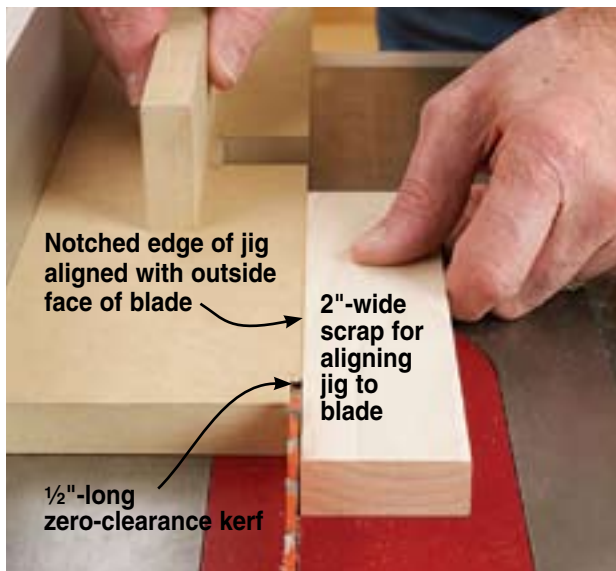
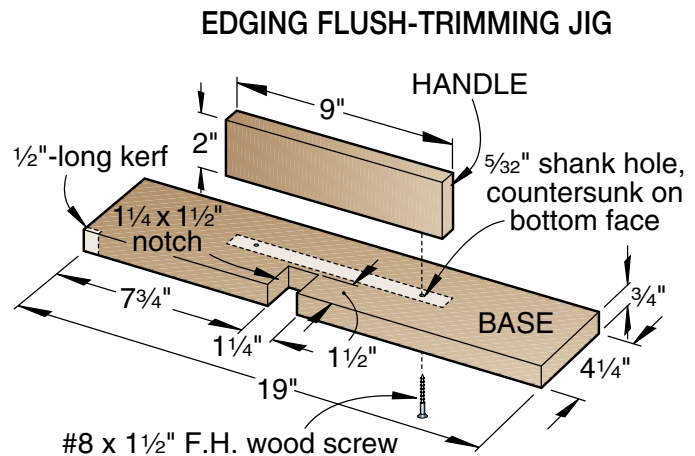


SHOP TIP

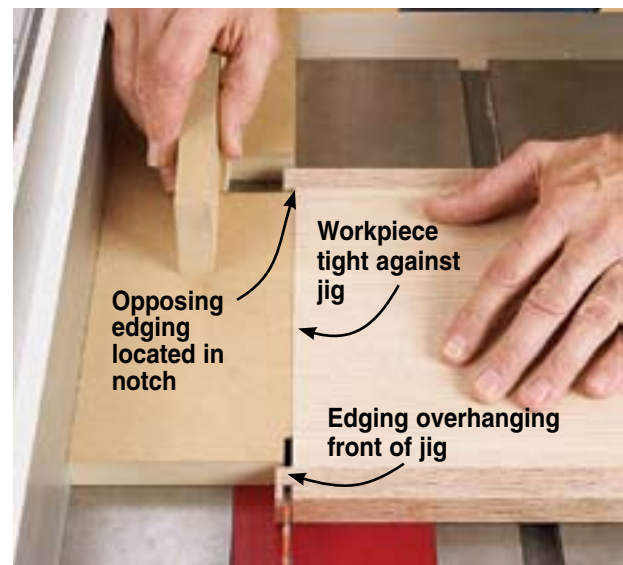
A simple jig makes it easy to flush-trim edging ends

Ever tried to trim edging flush with an end or edge of a plywood panel and accidentally cut into the panel? With the jig shown *below*, you'll quickly trim all of the entertainment center edging perfectly flush, eliminating alignment guesswork and miscuts.

Step 1: Make the jig from $\frac{3}{4}$ "-thick scrap, cutting the $1\frac{1}{4} \times 1\frac{1}{2}$ " notch in the base, where dimensioned. (You'll cut the $\frac{1}{2}$ "-long kerf in the base in the next step.) Note that for other projects, you may need to change the location of the notch and length of the jig, depending on the sizes of the panels.



Step 2: With the saw off, position your tablesaw fence to align the notched edge of the jig with the outside face of the blade. To verify precise alignment, hold a 2"-wide piece of $\frac{3}{4}$ " scrap against the jig, extending the front end by about 1". Cut a $\frac{1}{2}$ "-long kerf in the jig, as shown. Examine the edge of the 2"-wide scrap, and make sure you don't see any saw marks. If you do, adjust the fence, and test again.



Step 3: Place your workpiece tight against the jig with the edging pieces overhanging the front end and extending into the notch, as shown. (For panels measuring more than 19" in width or length, let the edging overhang both ends of the jig.) Flush-trim the front edging, stopping when the blade enters the clearance kerf. (To maintain proper workpiece support, do not cut deeper into the kerf.) Now flip the panel and trim the opposing edging.

1 EXPLODED VIEW

TOP
 41"
 21 1/2"
 44"
 20° bevel
 Mitered ends
 3/4"
 23 3/4"
 5/32" shank hole, countersunk on bottom face, with a mating 7/64" pilot hole 1/2" deep in part (E)

CASE
 3 1/2"
 3 1/2"
 17 7/8"
 1 1/4"
 16"
 3/4"
 5/8" shelf standard 20" long
 5/8" grooves 3/16" deep
 No round-over
 5/8" round-overs, both sides
 #8 x 1 1/4" F.H. wood screws
 Roller-catch clip
 Shelf support
 Double roller catch
 CASE

DRAWER
 6 1/2"
 1/8"
 6 1/2"
 1/8" groove 1/8" deep cut after assembly of drawer front
 6 1/2"
 1/8"

BOTTOM
 41"
 21 1/2"
 42 1/2"
 23"
 7/64" pilot hole 1/2" deep
 5/32" shank hole, countersunk

BASE
 Mitered ends

2a TOP/DOORSTOP DETAIL

2b ROUTING THE PARTIAL

Technical drawing of the front view of the assembly. It shows a wooden beam with a 20-degree tapered end (F) and a rectangular section (E). A pilot hole (7/64 inch diameter, 1/2 inch deep) is drilled through the beam. A #8 x 1 1/4 inch P.H. wood screw is inserted through the beam and a rubber bumper (BB) into the beam. A #8 flat washer is placed under the bumper. Dimensions include 1 1/2 inch, 2 1/2 inch, 3/4 inch, 2 1/8 inch, 1/2 inch, and 3/4 inch. A 1/2 inch diameter adhesive-backed rubber bumper is shown.

Diagram illustrating the setup for a router fence. A 3/8" round-over bit is shown cutting a groove into a workpiece. The fence is positioned against the workpiece, and the gap between the fence and the workpiece is 5/16". The router table is shown below the workpiece.

Diagram illustrating the installation of a hinge plate on a door. The diagram shows a cross-section of the door and the hinge plate. Key dimensions and labels include:

- F**: Top hinge location.
- E**: Top edge of the door.
- L**: Bottom hinge location.
- G**: Bottom edge of the door.
- Hinge plate**: The metal plate being installed.
- 27¹/₁₆"**: Distance from the top edge (E) to the center of the top hinge (F).
- 21¹/₄"**: Distance from the center of the top hinge (F) to the center of the bottom hinge (L).
- 31¹/₁₆"**: Total distance from the top edge (E) to the center of the bottom hinge (L).

2 Fit your tablesaw with a $\frac{3}{4}$ " dado blade. Then cut a $\frac{3}{8}$ "-deep rabbet along the top and bottom edges of the sides (G) on the *inside* face, where shown. Switch to a $\frac{5}{8}$ " dado blade. Now, on the *outside* face of the two *inner* sides (G), cut two $\frac{3}{16}$ "-deep grooves for $\frac{5}{8}$ " shelf standards, where dimensioned on **Drawing 2**.

3 Glue and clamp the sides (G) and tops/bottoms (D/H) together to form the cases, making sure the edging (D) on the tops and bottoms faces the front and the grooves for shelf standards in the two inner side panels face out. Check for square.

4 From $\frac{3}{4}$ "-thick stock resawn or planed to $\frac{1}{4}$ " thick, cut the side front trim (I), side top/bottom trim (J), and side rear trim (K) to the sizes listed. Glue and clamp the side front trim (I) to the outer sides (G), where shown on **Drawing 3**, flush with the front edges. Next, glue and clamp the side

top/bottom trim (J) in position, tight against the front trim and flush with the ends of the sides. Now glue and clamp the side rear trim (K) in place, as shown in **Photo B**. Identify the left and right cases.

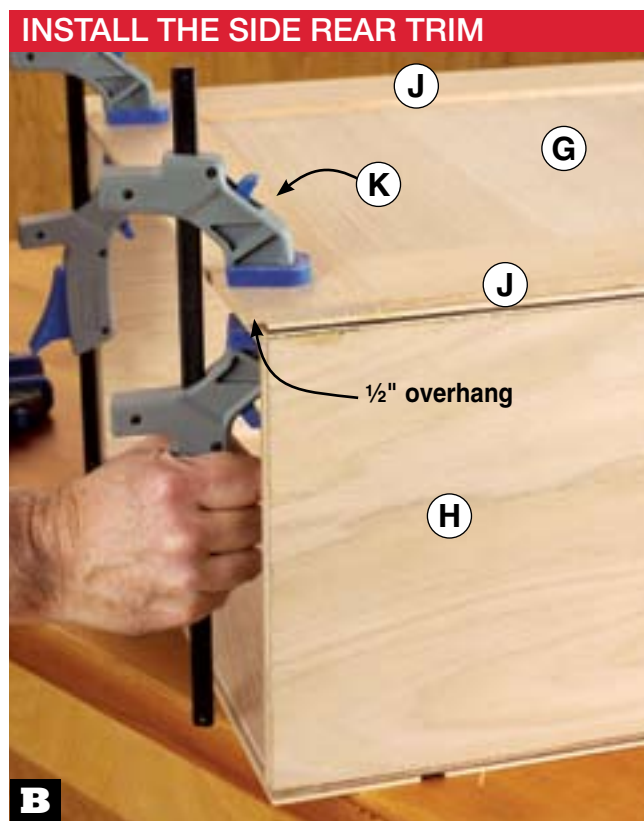
5 To determine the exact width of the front trim (L), measure the combined thickness of a side (G) and side front trim (I). (Ours measured $\frac{1}{32}$ " shy of 1".) Then, from $\frac{3}{4}$ "-thick stock, cut the four front trim pieces to the measured width and 20" long. Now glue and clamp the trim to the front of each case, where shown on **Drawings 2 and 3**, keeping the outer edges and ends flush.

6 From $\frac{3}{4}$ "-thick stock resawn or planed to $\frac{1}{4}$ " thick, cut the two drawer-slide spacers (M) to the size listed. Then glue and clamp the spacers to the inside face of the *inner* sides (G), flush with the bottoms (D/H) and tight against the front trim (L).

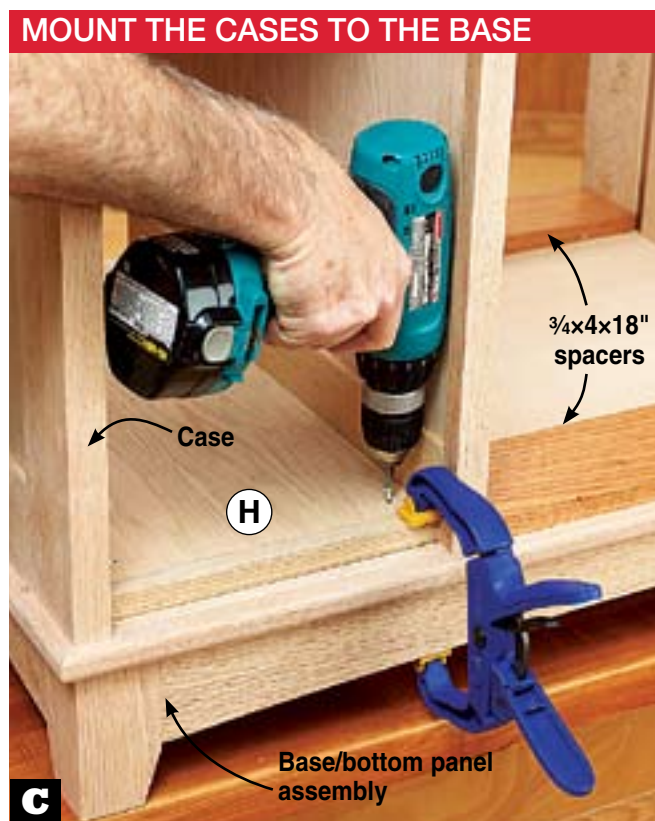
7 From $\frac{1}{2}$ " oak plywood, cut the backs (N) to size to fit the cases. The backs fit against the case edges and tight against the $\frac{1}{2}$ " overhang of the side rear trim (K). Set the backs aside.

8 Place the base/bottom panel assembly (A/B/C/D/E) on a flat work surface with the panel up. Using two $\frac{3}{4}$ "x4"x18" spacers between the cases, as shown in **Photo C**, center the cases side-to-side on the panel with the back edge of the side rear trim (K) flush with the back of the rear panel edging (D). Drill countersunk shank holes through the case bottoms (H) into the panel (E), where shown on **Drawings 2 and 3**, and drive the screws.

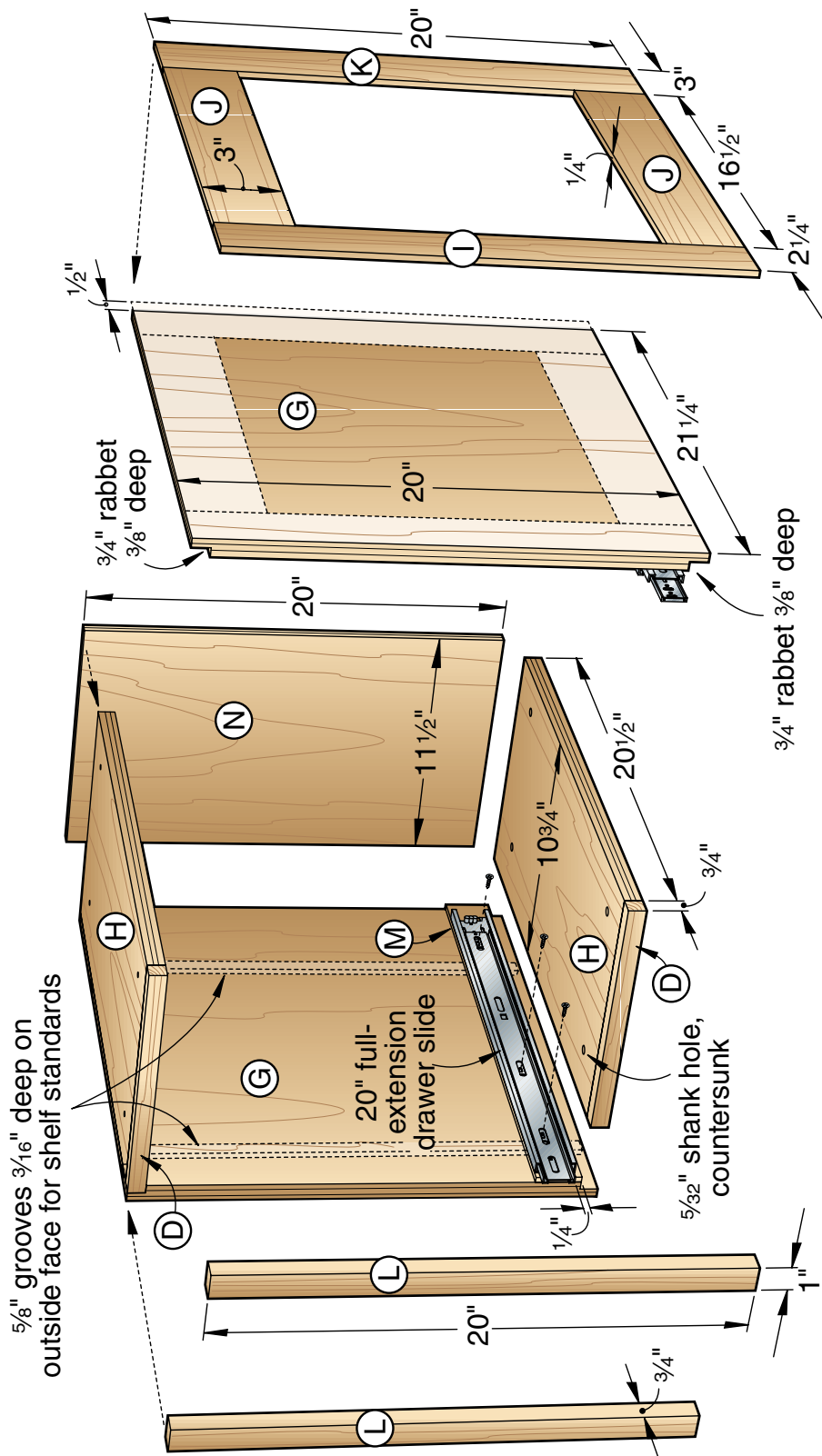
9 Position the top panel assembly (D/E/F) on the cases, centered side-to-side, with the back edge of the panel edging (D) flush with the back edge of the side rear trim (K). From inside the cases, drill the mounting holes through the tops (H) into the panel (E), and drive the screws.



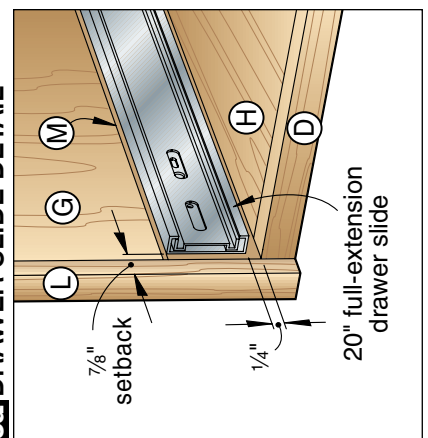
B Glue and clamp the side rear trim (K) tight against the top/bottom trim (J). The rear trim overhangs the case $\frac{1}{2}$ " for the back (N).



C With the cases aligned on the base assembly (see Step 8) and positioned 18" apart with spacers, screw the cases to the base.



3a DRAWER SLIDE DETAIL



3 CASE (Right case shown)

Time to construct the dual-shelf drawers

1 From $\frac{3}{4}$ " oak plywood, cut the shelves (O), shelf rails (P), and false fronts/back (Q) to the sizes listed. Then, from the edging blanks (D), crosscut pieces to the lengths needed for the shelves, rails, and fronts/back, where shown on **Drawing 4**. Apply the edging. As an option, you easily can add sliding supports to the shelves for your media. For more on this, see the Top Shop Tip on *page 15*.

2 Glue and clamp the shelf rails (D/P) to the shelves (D/O), aligning the rails with the shelf/edging joints and keeping the ends of the rails and shelves flush, where shown.

3 From $\frac{3}{4}$ "-thick stock, cut the drawer-slide supports (R) to size. Then glue and clamp the supports to the bottom of the bottom shelves (D/O) $\frac{3}{8}$ " from the outside edge of the edging (D) and centered with a $\frac{3}{4}$ " overhang at each end, where shown on **Drawing 4** and as shown in **Photo D**.

4 Pair together the false front/back (D/Q) for each drawer, and identify the parts ("LFF" for the left false front, for example). On the *front* face of the parts, mark centerpoints for 10 countersunk shank holes, where dimensioned on **Drawing 5**, noting the left and right drawers are mirror images. Then, on the *back* face of the false fronts only, mark centerpoints for the four countersunk shank holes for attaching the fronts (S), where dimensioned. Drill and countersink the holes.

5 To assemble the drawers, clamp together (no glue) the top shelf assemblies (D/O/P), bottom shelf assemblies (D/O/P/R), and false fronts/back (D/Q), using spacers to position the shelves $9\frac{1}{4}$ " apart, where dimensioned on **Drawing 4** and as shown in **Photo E**. Using the countersunk shank holes in the false fronts/back as guides, drill pilot holes into the shelf assemblies. Then drive the screws.

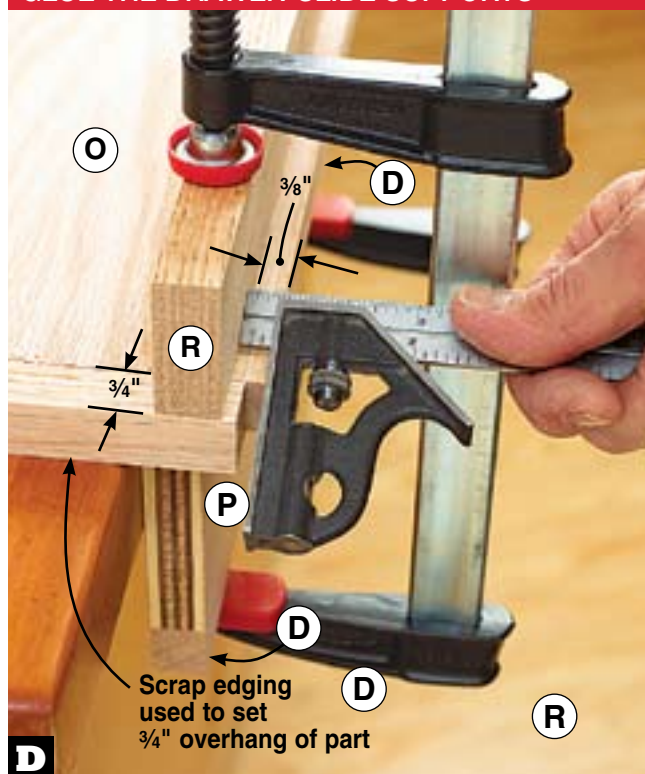
6 From $\frac{1}{2}$ " oak plywood, cut the fronts (S) to size. Sand the fronts smooth.

7 From the edging blanks (D), crosscut pieces to the lengths needed for the edges and ends of the fronts (S). On a flat surface, apply the edging, keeping it flush with the back face of the fronts.

8 From $\frac{3}{4}$ "-thick stock resawn or planed to $\frac{1}{4}$ " thick, cut the front trim (T) to size to fit between the edging (D) on the fronts (S). Glue and clamp the trim to the fronts, where dimensioned. After the glue dries, mark centerpoints centered in the openings on the *front* face of the fronts for the knob mounting holes, where shown. Drill the holes.

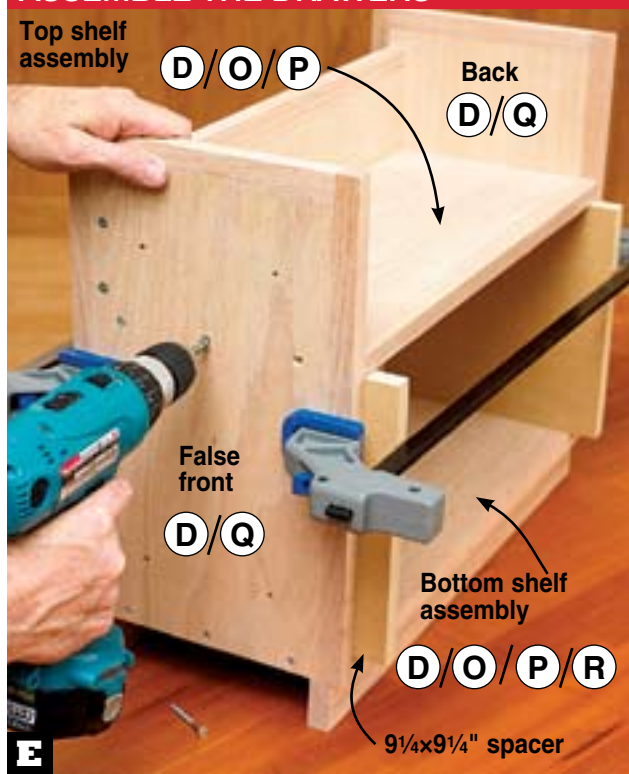
9 Fit your tablesaw with a standard $\frac{1}{8}$ "-kerf blade. Then crosscut two $\frac{1}{8}$ "-deep grooves across the front assemblies (D/S/T), where dimensioned on **Drawing 2**. (The

GLUE THE DRAWER-SLIDE SUPPORTS

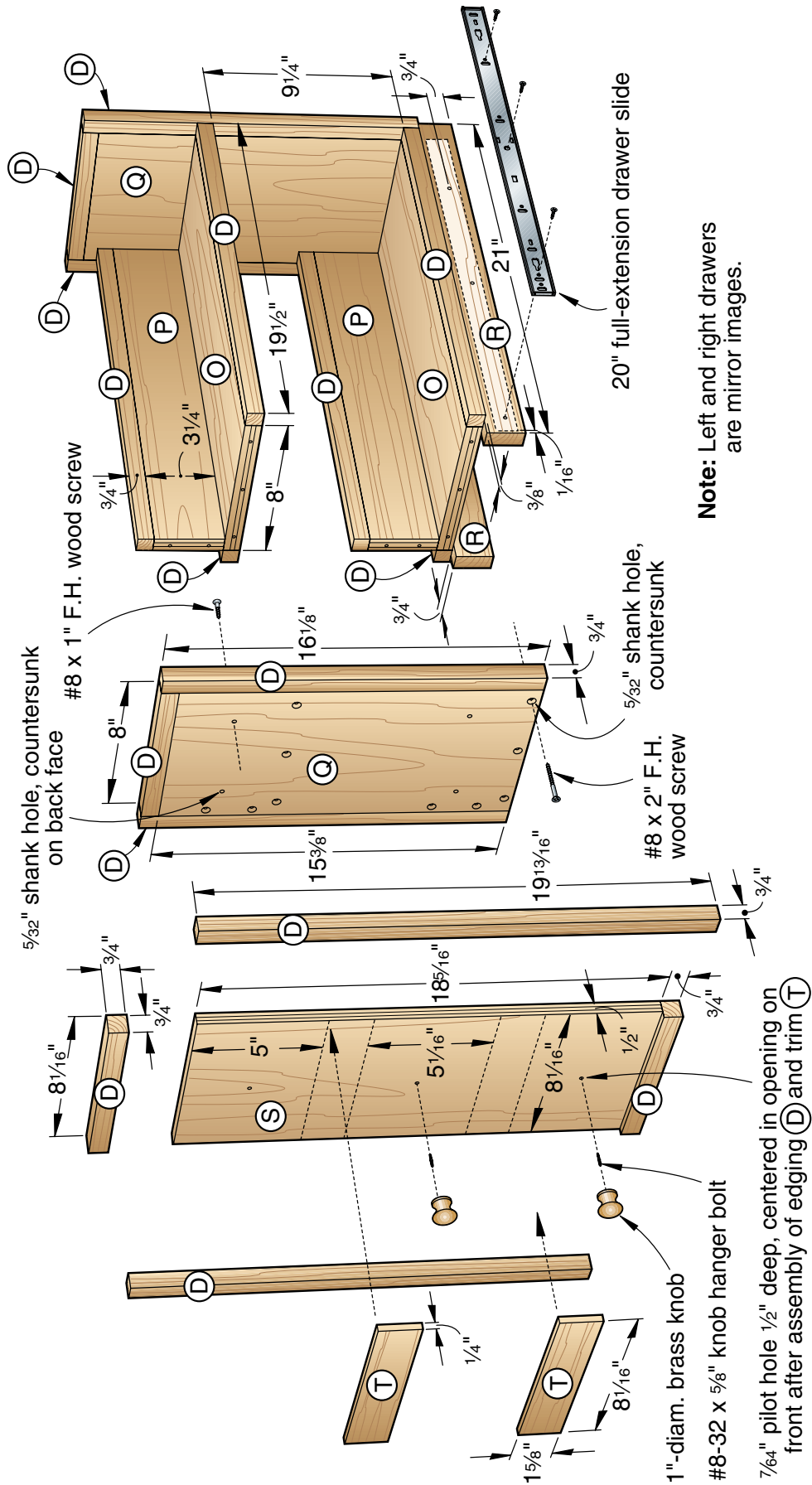


Glue and clamp a support (R) to the bottom of a bottom shelf (D/O), $\frac{3}{8}$ " from the outside edge with a $\frac{3}{4}$ " overhang at each end.

ASSEMBLE THE DRAWERS



With a top and bottom shelf assembly spaced $9\frac{1}{4}$ " apart, drive screws through the false fronts/back (D/Q) into the assemblies.



Note: Left and right drawers are mirror images.

4 DRAWER (Left drawer shown)

grooves are for accent purposes only.) Set the fronts aside.

Install the drawer slides, fronts, and case backs

1 To mount the 20" full-extension drawer slides, press the release lever and separate the slide members. Using 1/4" hardboard for a spacer, position an outer slide member in a case against the drawer-slide spacer (M), 7/8" back from the front face of the front trim (L), where dimensioned on **Drawing 3a** and as shown in **Photo F**. Mark the centers of the *horizontal* slots in the slide. Drill pilot holes, and drive the screws supplied with the slide. Using the same spacing and on the opposite side of the case, mount an outer slide member on the side (G). Repeat to mount the remaining outer slides in the other case.

2 Using a combination square, draw a line along the length of each drawer-slide support (R) 3/4" from the *bottom* edge on the *outside* face. Position an inner slide member on a support, 1/16" from the front end, where

dimensioned on **Drawing 4**, with the mounting holes centered on the marked line. Mark the centers of the *vertical* slots in the slide. Drill pilot holes, and drive the screws. Repeat to mount the remaining inner slides.

3 Insert the drawers into the cases, engaging the slides. Verify the drawers move smoothly. If needed, adjust the position of the inner slide members on the drawer-slide supports (R). Then drill pilot holes centered in the round holes in the slides, and drive the screws to fix the slide positions.

4 To mount the drawer fronts (D/S/T) to the false fronts (D/Q), position a front, centered top-to-bottom and side-to-side, in the case opening. Measure the bottom reveal. Then make two shims equal in thickness to your measurement. (Our reveal measured 3/32".) Next, apply 2"-wide, cloth-backed, double-faced tape to the false front. Reposition the front in the case opening, inserting the shims at the bottom to aid alignment. Firmly press

the drawer front against the false front. Repeat for the other front.

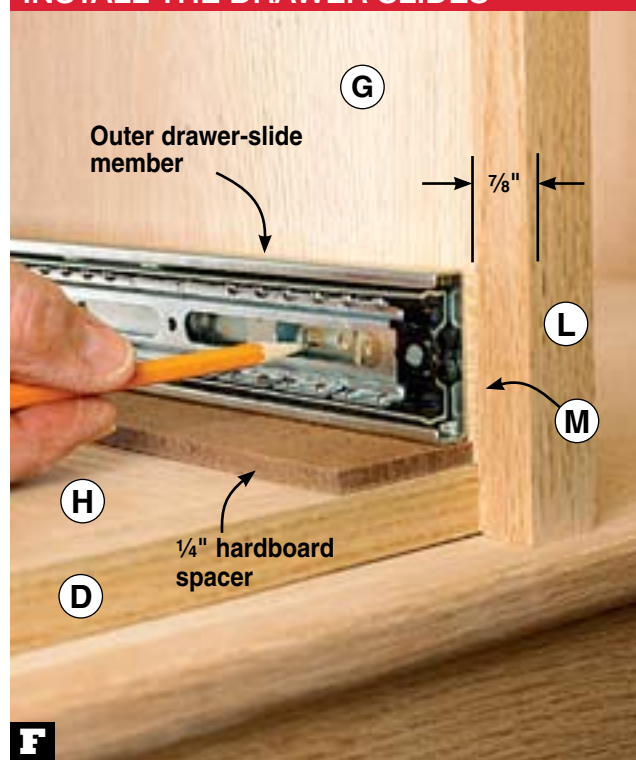
From the back of each case, push the drawer fully out. Clamp the drawer fronts to the false fronts, as shown in **Photo G**. Now drive the screws through the four countersunk shank holes on the back face of the false fronts into the drawer fronts. Remove the screws, drawer fronts, and tape, and reattach the fronts.

5 Retrieve the backs (N). Then glue and clamp them in place on the cases, where shown on **Drawing 3**, tight against the side rear trim (K).

Add the cabinet back and shelves

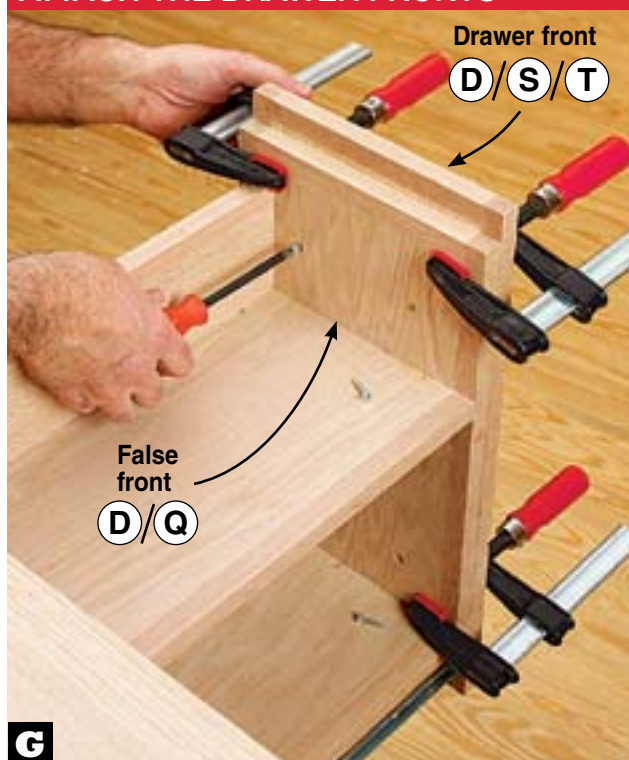
1 From 1/2" oak plywood, cut the back (U) to size to fit the opening between the case backs (N). Draw 3" holes and semicircular cutouts (for wire pass-through and panel removal) on the back, where dimensioned on **Drawing 5**. Drill 1/2" blade start holes through the 3" hole outlines. Then jigsaw the holes and semicircular cutouts to shape. Rout

INSTALL THE DRAWER SLIDES



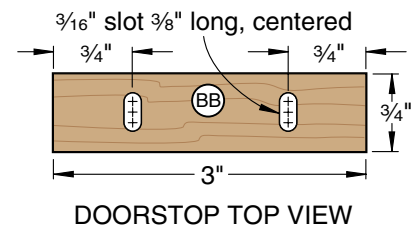
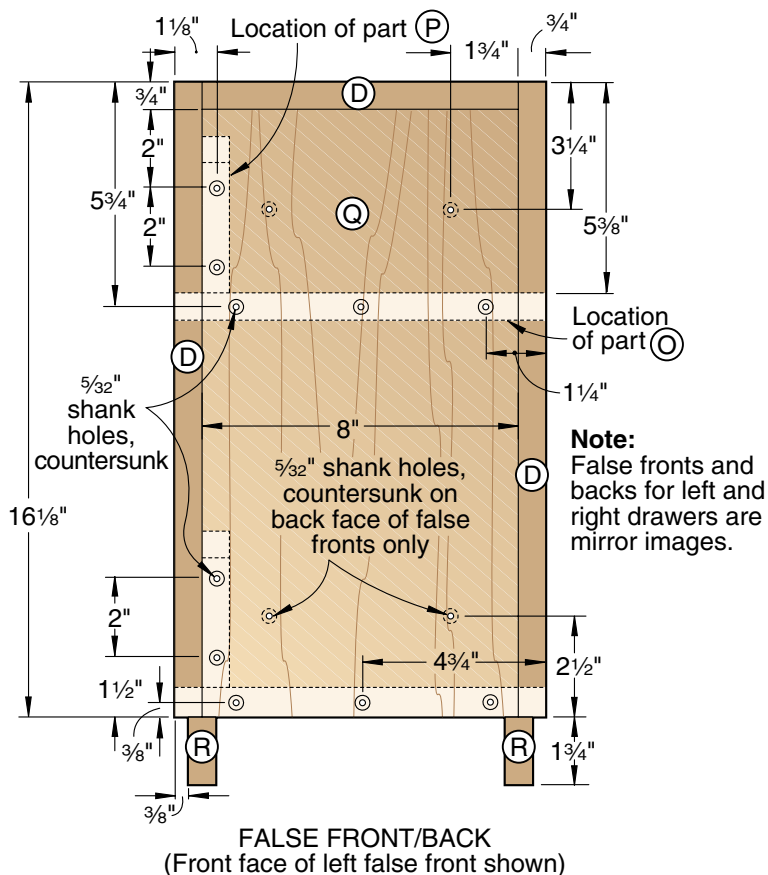
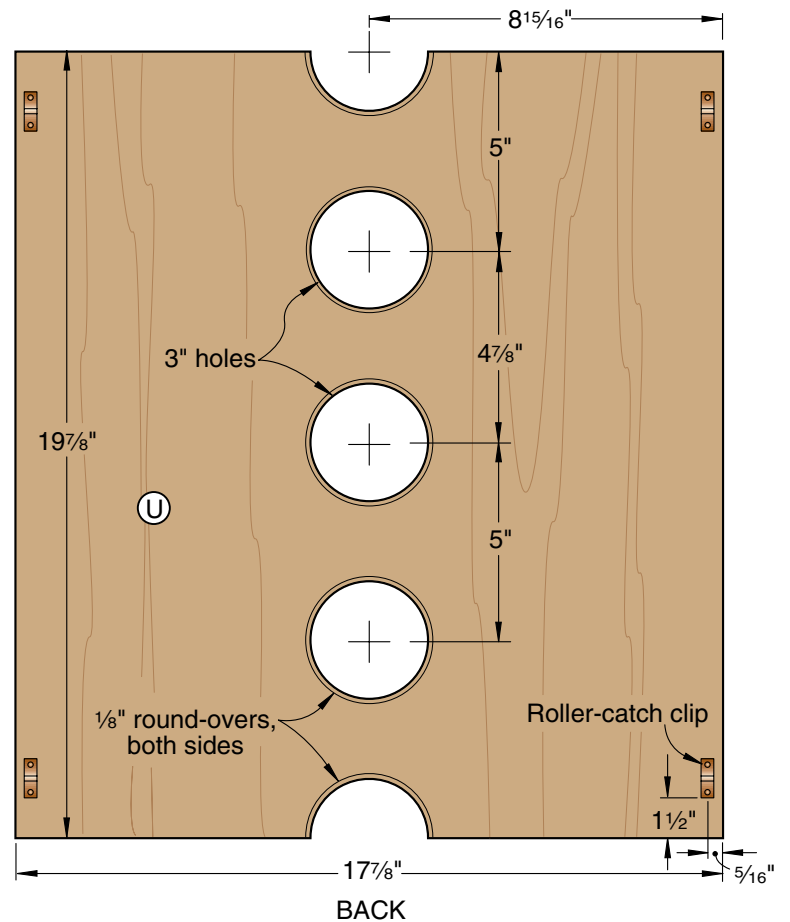
F Positioning an outer slide member on a drawer-slide spacer (M), as shown, mark the centers of the *horizontal* slots.

ATTACH THE DRAWER FRONTS



G Clamp a taped drawer front (D/S/T) to a false front (D/Q) to prevent movement. Then drive the screws to fasten the fronts together.

5 PARTS VIEW



a $\frac{1}{8}$ " round-over on the edges of the holes and cutouts on both faces.

2 Position roller-catch clips on the front face of the back (U), where dimensioned. Mark the center of the mounting holes in the clips. Drill pilot holes, and attach the clips using the supplied screws. To mount the mating double roller catches to the case sides (G), engage the catches on the clips, and position the back in the opening. Mark the catch mounting holes, as shown in **Photo H**. Remove the back and catches. Drill pilot holes, and screw the catches to the sides. Set the back aside.

3 From $\frac{3}{4}$ " oak plywood, cut the three shelves (V) to size. Then, from $\frac{3}{4}$ "-thick stock, cut the shelf trim (W) to size. Glue and clamp the trim to the front edge

of the shelves, flush with the ends and top faces. Set the shelves aside.

Make the stylish doors for the cabinet center

1 From $\frac{3}{4}$ "-thick stock, cut the bottom rails (X), top rails (Y), and stiles (Z) for the doors to the sizes listed. Save your rail cut-offs for making test tenons.

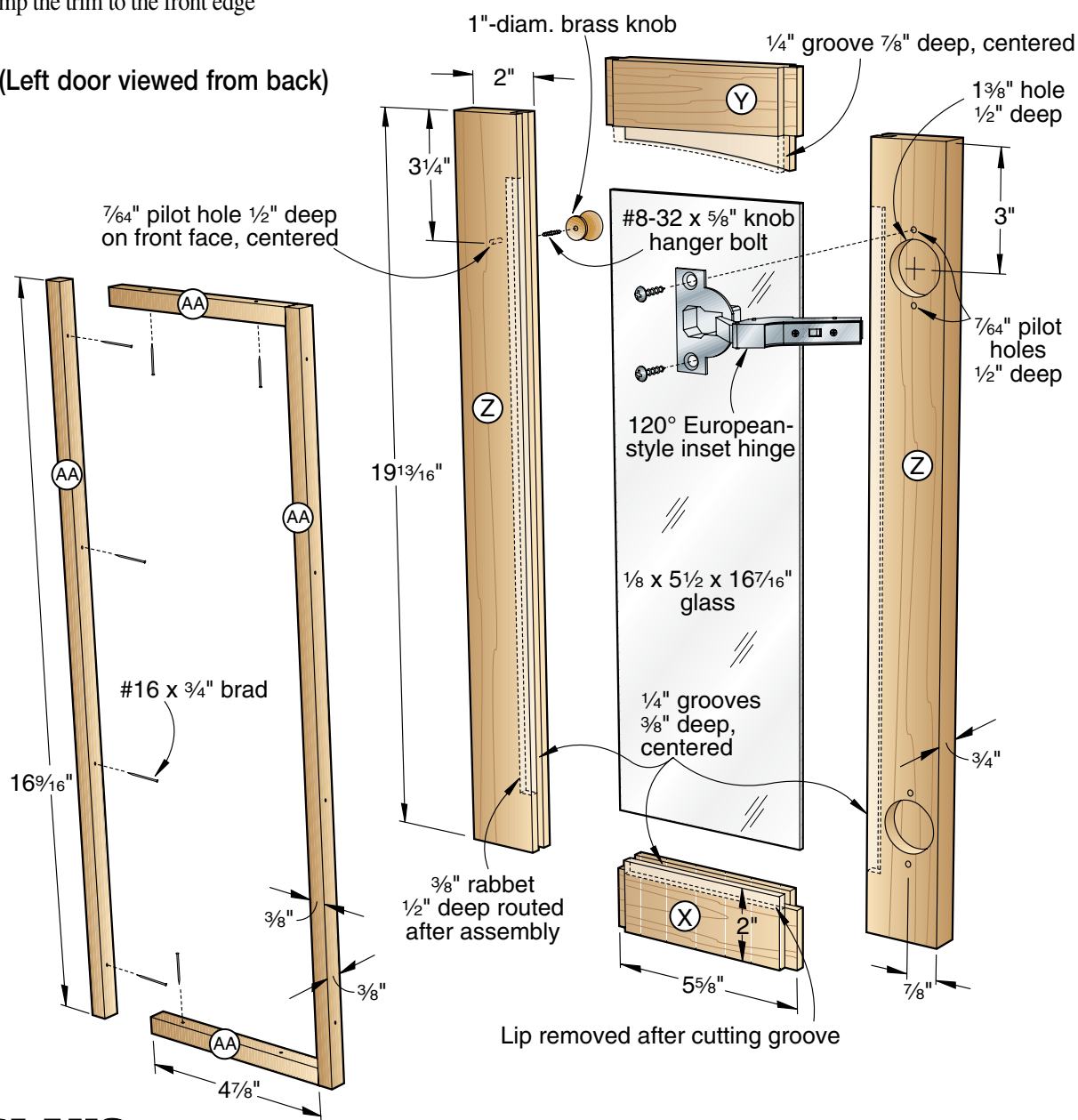
2 Using a dado blade in your tablesaw, cut a $\frac{1}{4}$ " groove $\frac{3}{8}$ " deep centered along the inside edges of the bottom rails (X) and stiles (Z), where shown on **Drawing 6**. Raise the blade to $\frac{7}{8}$ ". Now cut a centered groove along the inside edges of the top rails (Y).

3 Attach an auxiliary extension to your miter gauge and an auxiliary fence to the rip fence. Using your dado blade, form a $\frac{1}{4}$ " tenon $\frac{3}{8}$ " long on a rail cutoff, where shown on **Drawing 7**. Test-fit the tenon in the groove in a stile (Z). Adjust your setup, if needed. Then cut the tenons on both ends of the bottom and top rails (X, Y).

4 Noting the left and right top rails (Y) are mirror images, draw the curve along the bottom edge, where dimensioned. Bandsaw and sand to the lines.

5 To remove the back lip of the groove in the bottom and top rails (X, Y), where shown, to receive the

6 DOOR (Left door viewed from back)



glass and glass stops (AA), switch to a standard blade in your tablesaw. Position the fence 1 5/8" from the *inside* face of the blade, and raise the blade to 3/16". Keeping the *top* edge of a top rail (Y) tight against the fence with the *back* face down, cut off the lip. Repeat for the other top rail. Using the same setup, position the *bottom* edge of a bottom rail (X) against the fence with the *back* face down. Cut off the lip. Repeat for the other bottom rail.

6 Glue and clamp the bottom and top rails (X, Y) and stiles (Z) together, checking for square.

7 Chuck a 3/8" rabbeting bit in your router. Then, on the *back* of each door, rout a 1/2"-deep rabbet along the *inside* edges of the stiles (Z), where shown on **Drawing 6**, removing the back lip of the grooves. Make sure the bit guide bearing makes good contact

with the front lip before routing the rabbet. Square the ends of the rabbets with a chisel.

8 On the *front* face of the *inner* stile (Z) of each door, mark a centerpoint for a knob hanger bolt for mounting a 1"-diameter brass knob, where dimensioned. Drill a 7/64" pilot hole 1/2" deep at the marked locations.

Next, on the *back* face of the *outer* stile of each door, mark centerpoints for 1 3/8" holes 1/2" deep for the 120° European-style inset hinges, where dimensioned. Using a Forstner bit in your drill press, bore the holes. (Because the length of the centerpoint varies on Forstner bits, we bored a hole in 3/4"-thick scrap first to make sure the tip would not go through the piece.) Position a hinge-cup member in each hole, and mark the mounting holes. Now drill pilot holes, and drive the screws supplied

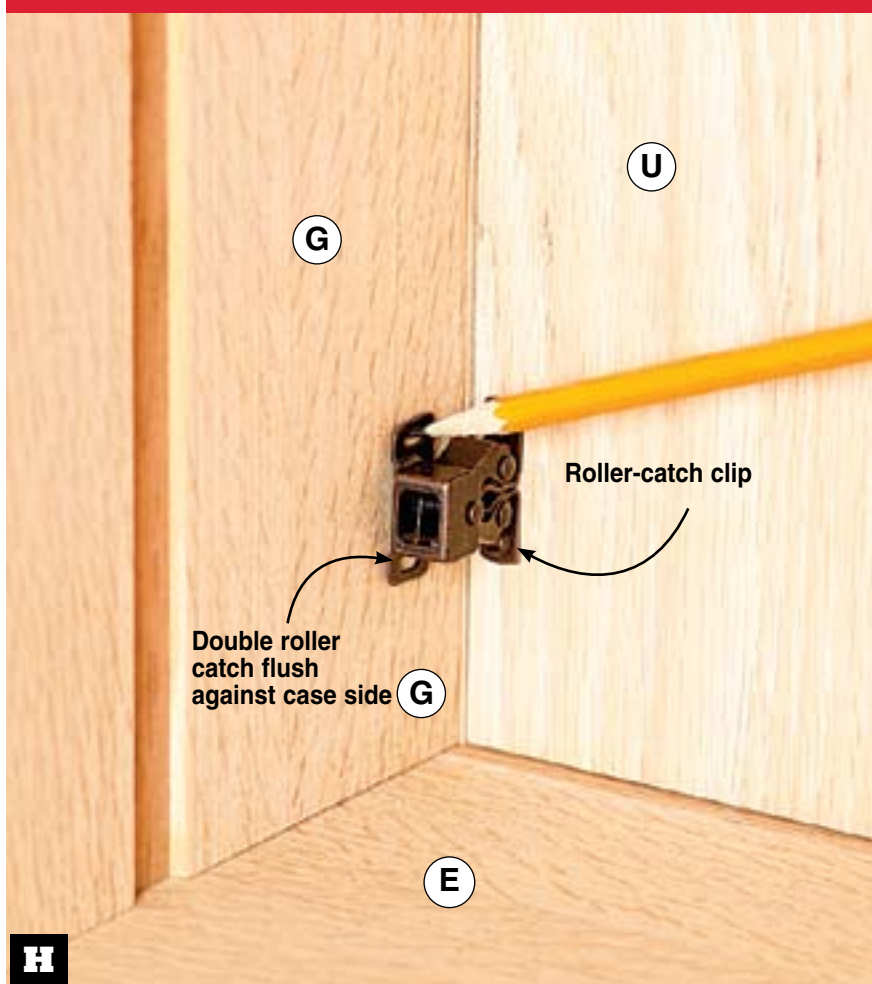
with the hinges.

9 To mount the mating hinge-plate members, mark centerpoints on the *outside* face of the case sides (G) for the mounting holes, where dimensioned on **Drawing 2c**. Drill pilot holes. Then secure the mounting plates using the supplied screws. Now hang the doors, clipping the hinge arm to the mounting plate. Adjust the hinge screws as needed to establish an equal reveal all around and between the doors.

10 From 3/4"-thick stock planed to 3/8" thick, cut the glass stop blank (AA) to size. Crosscut pieces from the blank to the lengths needed to fit the doors, where shown on **Drawing 6**. Set the stops aside.

11 From your leftover edging blanks (D), crosscut a 3"-long piece for the doorstep (BB). Using a 3/16" twist bit in your drill press and drilling overlapping holes, form 3/8"-long slots in the stop, where dimensioned on **Drawing 5**. Position the stop on the bottom of the top panel (E), centered between the cases, where shown on **Drawing 2**, and 2 1/8" from the front edge of the front top-panel trim (F), where shown on **Drawing 2a**. Mark the centers of the slots using an awl. Then drill pilot holes at the marked locations. Set the stop aside.

INSTALL THE ROLLER CATCHES



With a double roller catch engaged on the mating clip and flush against a case side (G), mark the centers of the mounting holes.

Time to apply the finish and install the shelves

1 Remove the doors, drawers, and all hardware. (We marked the door hinge parts and the mounting locations to ensure correct reinstallation and avoid hinge readjustment.) Sand the cabinet, back, drawers, and doors to 220 grit, and remove the dust. Apply a stain, if you wish. (We used Zar Oil-Based Stain, no. 110 Salem Maple.) Then apply three coats of a clear finish. (We used AquaZar Water-Based Clear Satin Polyurethane, sanding to 320 grit between coats.)

2 Install the hardware. Then, to mount the 1"-diameter brass knobs on the drawer fronts (S), where shown on **Drawing 4**, and on the door stiles (Z), where shown on **Drawing 6**, prethread the previously drilled 7/64" pilot holes 1/2" deep in the fronts and stiles with a #8x1" flathead wood screw. Thread #8-32x3/8" knob hanger bolts into the

knobs. Now mount the knobs on the fronts and doors. Slide the drawers into the cases.

3 From $\frac{5}{8}$ " shelf standards 24" long, hacksaw four 20"-long pieces to fit the grooves in the inner case sides (G). Note the inch markings on the standards, and make sure you cut and install them so the slots for the shelf supports align. Place the standards in the grooves, and secure them in place

with the supplied nails. Now install the shelves (V/W) where desired using shelf supports.

4 Have two pieces of $\frac{1}{8} \times 5\frac{1}{2} \times 16\frac{7}{16}$ " glass cut for the doors. Install the glass and glass stops (AA) in each door, where shown on **Drawing 6**, using #16 $\times\frac{3}{4}$ " brads. To prevent splitting the stops, drill holes in them using a #16 $\times 1$ " brad with the head snipped off. Also, place a piece of cardboard

or $\frac{1}{8}$ " hardboard on the glass to protect it while driving the brads. Rehang the doors.

5 Apply two $\frac{1}{2}$ "-diameter adhesive-backed rubber bumpers to the front face of the doorstop (BB), where shown on **Drawings 2** and **2a**. Then screw the doorstop to the top panel (E), positioning it so the doors close flush against it.

6 Finally, using a helper, place your TV on top of the entertainment center. Set your electronic components on the shelves (V/W), and route the wiring through the holes in the back (U). Snap the back into position. Then load the drawers with videos and CDs. Now rustle up some popcorn and drinks, put your feet up, and enjoy a movie while admiring your handiwork.

Produced by **Marlen Kemmet**

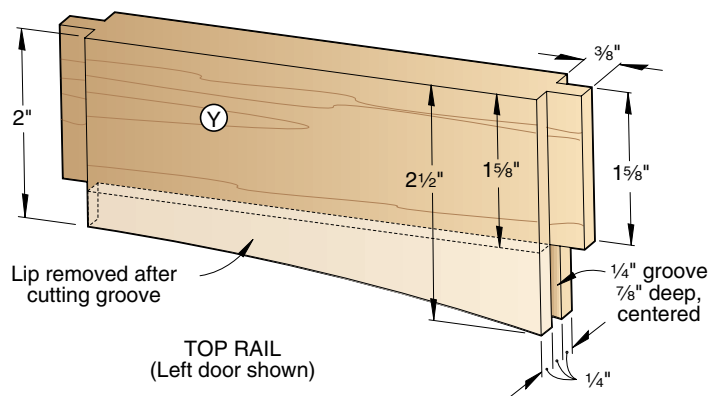
Project design: **Kevin Boyle**

Illustrations: **Roxanne LeMoine**

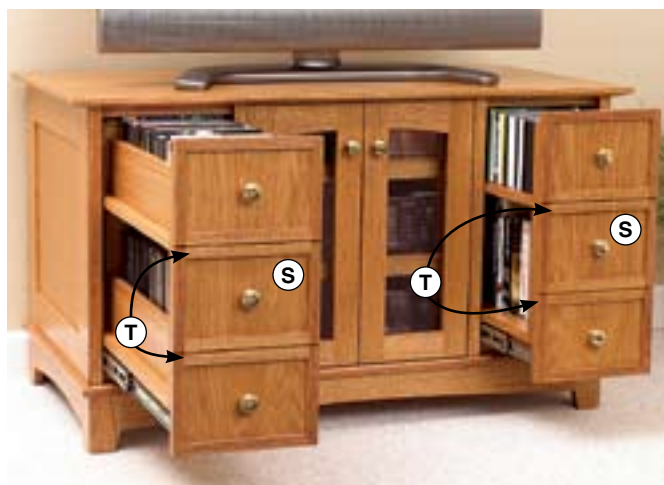
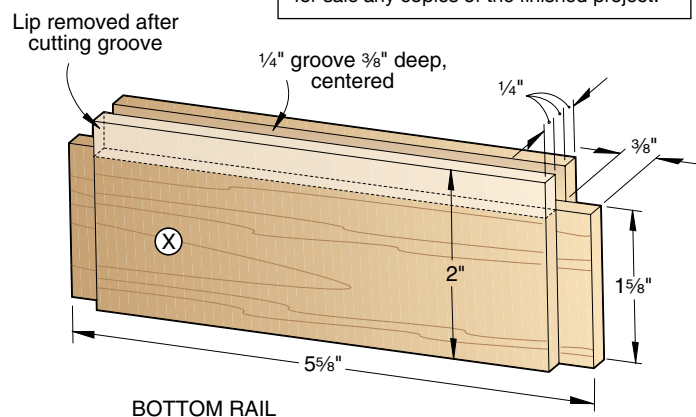
Graphic design: **Lorna Johnson**

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7 DOOR-RAIL TENONS (Viewed from back)



Note: Top rails for left and right doors are mirror images.



Two pieces of front trim (T), with $\frac{1}{8}$ " grooves centered along the front face, create faux three-panel drawer fronts (S) that add style to the entertainment center while cleverly concealing the dual-shelf drawers used for media storage.

Keyhole bit unlocks the secret to no-slip bookends

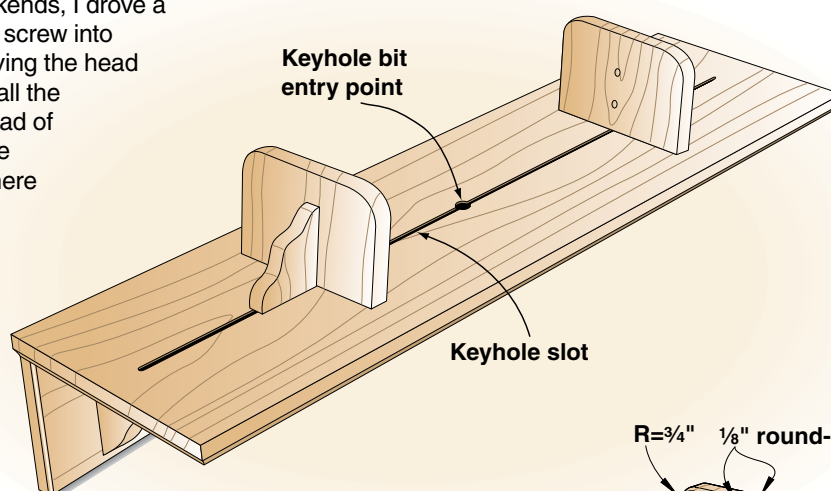
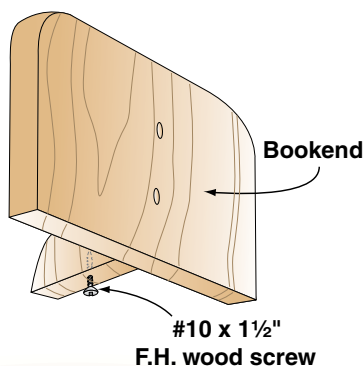
I've built many a bookshelf over the years and have always been frustrated by free-standing bookends, which tend to slip or tip. So, while crafting a bookshelf for my great-granddaughter recently, I hit upon the idea of fully adjustable built-in bookends.

In the top of the shelf, I used a keyhole bit in my plunge router to make a stopped slot, as shown in the drawing. I plunged the bit $\frac{1}{2}$ " deep into the center of the shelf, and then routed to near each end. That created a keyhole slot with a single entry hole that will be hidden by books.

After making the bookends, I drove a #10x1 $\frac{1}{2}$ " flathead wood screw into the bottom of each, leaving the head about $\frac{1}{4}$ " proud. To install the bookends, insert the head of the screw into one of the keyholes and slide it where you want it. The pressure from a book or two leaning against the bookends prevents them from sliding away.

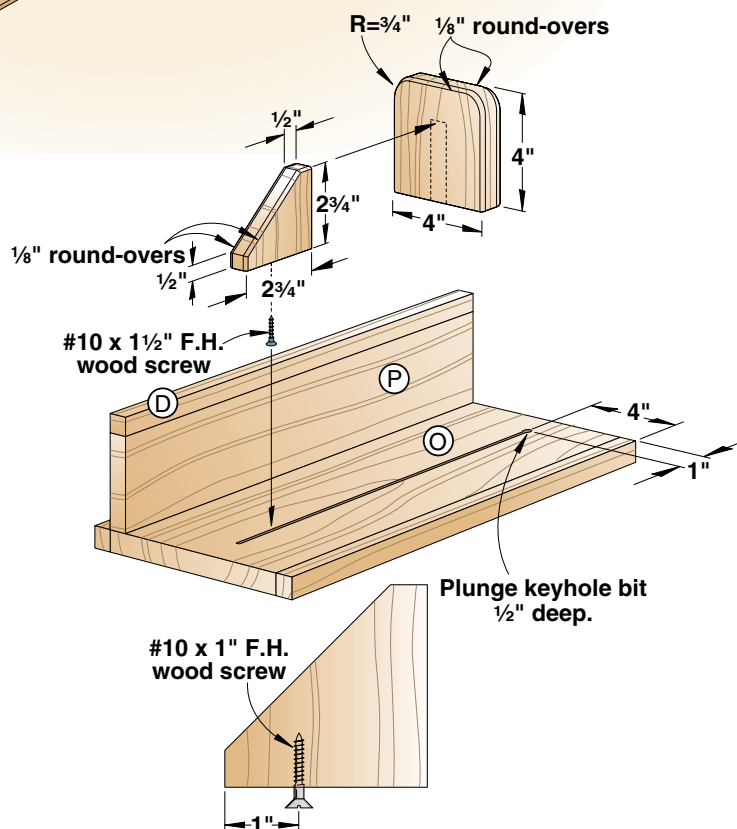
—Gerald "Jum" Coorough,
Prairie du Chien, Wis.

top shop tip



Adapting Jum's idea to the entertainment center

Jum's tip arrived too late for us to build it into the design of the Compact Entertainment Center. But we think it's the perfect solution for keeping your CD and DVD collections from falling flat on their respective shelves. If you'd like to add "bookends" to that project, build them as shown in the drawing, at right, and add the keyhole slot in the shelves (O) where shown.



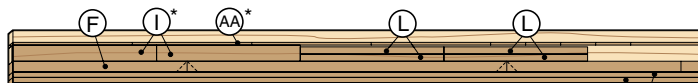
Cutting Diagram



3/4 x 7 1/4 x 96" Oak (5.3 bd. ft.)

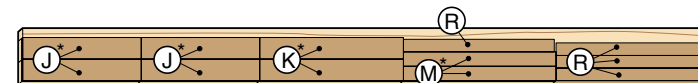


3/4 x 7 1/4 x 96" Oak (5.3 bd. ft.)

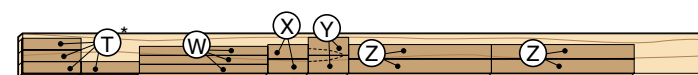


3/4 x 7 1/4 x 96" Oak (5.3 bd. ft.)

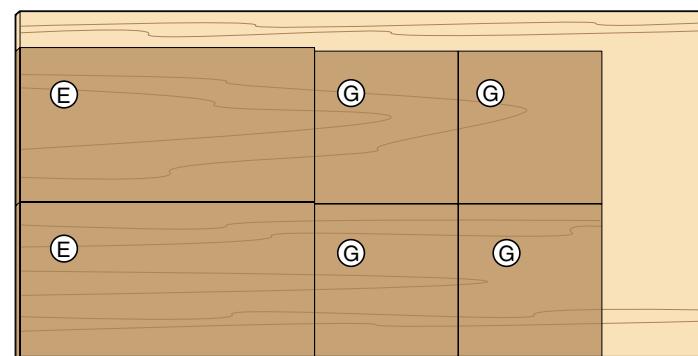
*Plane or resaw to the thicknesses listed in the Materials List.



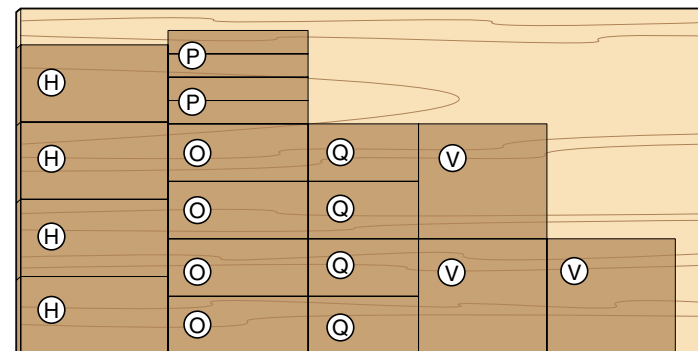
3/4 x 7 1/4 x 96" Oak (5.3 bd. ft.)



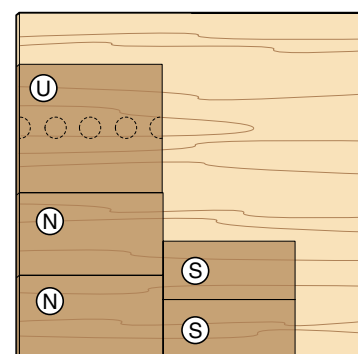
3/4 x 5 1/2 x 96" Oak (4 bd. ft.)



3/4 x 48 x 96" Oak plywood



3/4 x 48 x 96" Oak plywood



1/2 x 48 x 48" Oak plywood

Materials List

Base	FINISHED SIZE			Matl.	Qty.
	T	W	L		
A side rails	3/4"	2 3/4"	18"	O	2
B front/back rails	3/4"	2 3/4"	37"	O	2
C* foot halves	3/4"	2 1/4"	4 1/2"	O	8
Panel edging					
D edging blanks	3/4"	3/4"	96"	O	9
Top/bottom					
E top/bottom panels	3/4"	21 1/2"	41"	OP	2
F top-panel trim blank	3/4"	1 1/2"	96"	O	1
Cases (2 needed)					
G sides	3/4"	21 1/4"	20"	OP	4
H tops/bottoms	3/4"	10 3/4"	20 1/2"	OP	4
I side front trim	1/4"	2 1/4"	20"	O	2
J side top/bottom trim	1/4"	3"	16 1/2"	O	4
K side rear trim	1/4"	3"	20"	O	2
L front trim	3/4"	1"	20"	O	4
M drawer-slide spacers	1/4"	2"	21 1/4"	O	2
N backs	1/2"	11 1/2"	20"	OP	2
Drawers (2 needed)					
O shelves	3/4"	8"	19 1/2"	OP	4
P shelf rails	3/4"	3 1/4"	19 1/2"	OP	4
Q false fronts/backs	3/4"	8"	15 3/8"	OP	4
R drawer-slide supports	3/4"	1 3/4"	21"	O	4
S fronts	1/2"	8 1/16"	18 5/16"	OP	2
T front trim	1/4"	1 5/8"	8 1/16"	O	4
Back and shelves					
U back	1/2"	17 7/8"	19 7/8"	OP	1
V shelves	3/4"	16"	17 7/8"	OP	3
W shelf trim	3/4"	1 1/4"	17 7/8"	O	3
Doors (2 needed)					
X bottom rails	3/4"	2"	5 5/8"	O	2
Y top rails	3/4"	2 1/2"	5 5/8"	O	2
Z stiles	3/4"	2"	19 13/16"	O	4
AA glass stop blank	3/8"	3/8"	96"	O	1
BB doorstop	3/4"	3/4"	3"	O	1

*Parts initially cut oversize. See the instructions.

Materials key: O—oak, OP—oak plywood.

Supplies: Spray adhesive; 2"-wide, cloth-backed, double-faced tape; #8x1", #8x1 1/4", and #8x2" flathead wood screws; #8-32x5/8" knob hanger bolts; #10 biscuits; 1/8x5 1/2x16 7/16" glass (2); #16x3/4" and #16x1" brads; #8x1 1/4" panhead wood screws (2); #8 flat washers (2); 1/2"-diam. adhesive-backed rubber bumpers (2).

Blades and bits: Dado-blade set, 1/8" and 3/8" round-over and 3/8" rabbeting router bits, 1 3/8" Forstner bit.

Source

Hardware: 1"-diameter brass knobs no. 36467, (8);

double roller catches no. 29785, (1 pkg.) of 4;

120° European-style inset hinges

no. 55833, (2 pr.);

slides no. 32508, (2 pr.);

24" long no. 33779, (4);

(1 pkg.) of 16.

800-279-4441; rockler.com.

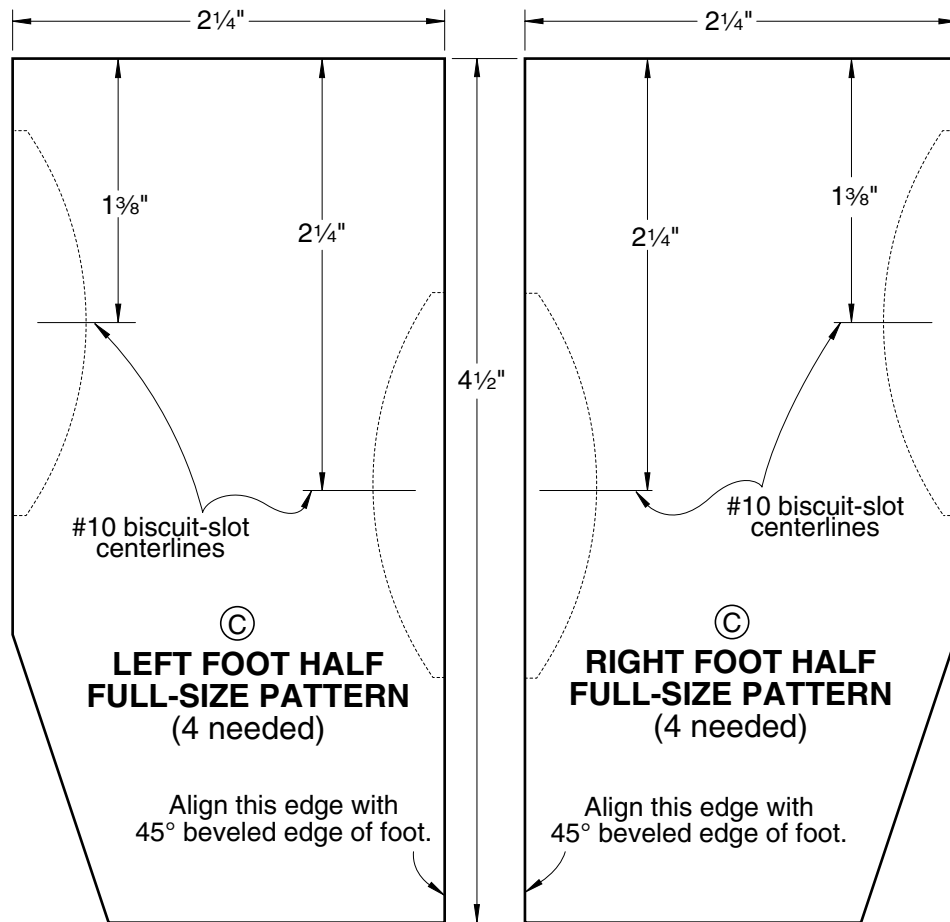
20" full-extension drawer

5/8" shelf standards

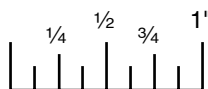
shelf supports no. 33910,

Call or click Rockler,

FULL-SIZE PATTERN



To ensure full-size patterns are correct size, your printer should be set to print at 100% (not fit to page). Measure full-size patterns to verify size.



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